



State of California Seismic Safety Commission Biannual Newsletter July through December 2005



Seismic Safety Commission Releases Report on Tsunami Risk to California

On December 26, 2004 a strong earthquake of magnitude 9.3 occurred off the coast of northern Sumatra, triggering a giant tsunami that propagated throughout the Indian Ocean Basin, causing massive casualties and destruction.

Damaging tsunamis are rare but potentially catastrophic events that present a danger to the people and economy of California. Over 80 tsunamis have been observed or recorded along the coast of California in the past 150 years, 9 causing minor damage in ports and harbors and 2 with major impacts. Four events caused deaths; the worst occurred in 1964 when 12 people died in California from the tsunami generated by the Great Alaska earthquake. Local earthquakes can produce damaging tsunamis that will provide very little warning time.

As a result of the Sumatra event and past damaging California tsunamis, the Seismic Safety Commission created a Tsunami Safety Committee to evaluate the state of tsunami readiness in California. This committee held six meetings, took testimony from representatives of local governments and the scientific community. Based on this testimony, the Seismic Safety Commission made the following findings.

Findings

1 Tsunamis, generated either locally or from events elsewhere in the Pacific Basin, pose a significant threat to life and property in California.

2 Tsunamis present a substantial risk to the economy of the State and Nation, primarily through the impact on our ports.

3. Californians are not adequately educated about tsunamis and the risk they pose; consequently, many are unaware how to respond to natural or official tsunami warnings.

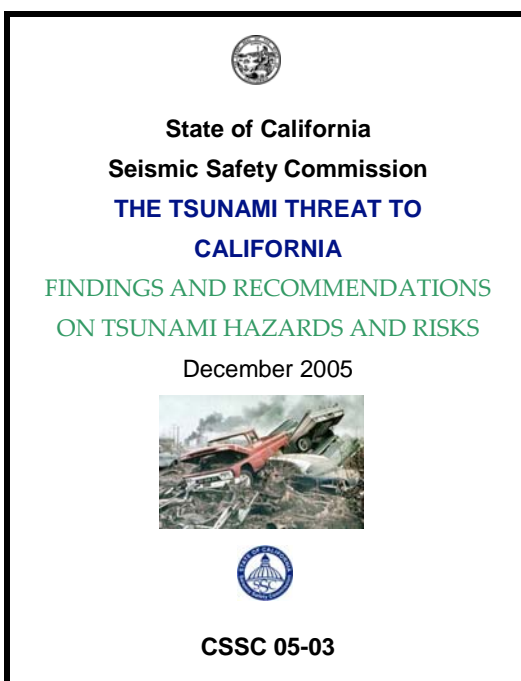
4. The existing tsunami warning system has not achieved all of its objectives for several reasons including problems with communications, agency coordination and protocols.

5. Present building codes and guidelines do not adequately address the impacts of tsunamis on structures. Currently available tsunami inundation maps are not appropriate for code or guideline applications.

6. Federal programs have provided resources to initiate tsunami hazard mapping and mitigation programs. However, more effort and a better understanding of the risk is required to bring the treatment of tsunamis to a level comparable to other State hazards such as earthquakes.

7 The Governor's Office of Emergency Services and many local governments have been proactive in addressing

the State's tsunami risk and since the Sumatran tsunami and the June 14, 2005 tsunami warning in northern California that renewed interest in improving warning dissemination and other aspects of tsunami planning and preparedness.



For a copy of the report which includes the recommendations, log on to the Commission's website and click on "publications (www.seismic.ca.gov)

California's Urban Search and Rescue Teams Testify Before the Commission on Hurricane Katrina Experience

At the October 13, Commission meeting, members of California's Urban Search and Rescue Team testified on their experience with Hurricane Katrina. Fire Chief Rick Martinez, Sacramento Metropolitan Fire District and Los Angeles Assistant Fire Chief Gregory West gave presentations on the extreme conditions and challenges they experienced. They were deployed to the Gulf Coast as part of an urban search and rescue (USAR) team dispatched to help victims of Hurricane Katrina.

Chief West described California's USAR teams and resources. He said team members are trained in command, planning, search, rescue, logistics, and medical response. He noted there are three levels of USAR teams: Type 1, with heavy equipment; Type 3, with light rescue equipment; and a swift-water rescue force. He showed a series of slides taken during his Gulf Coast deployment. He said California Task Force 1 endured a 36-hour drive to a staging area in Dallas, and was then dispatched to Mississippi. Along the way, the team encountered many obstacles, including downed trees and power lines, power outages, fuel and water shortages, horrible traffic, bad weather, scarcity of cash, and unhealthy conditions. His team was involved in three missions, including clearing and removal of debris from buildings damaged by a casino barge that broke loose and landed inland, helping a light task force from Oakland search a heavily damaged neighborhood, and surveying bayous and backwater areas and helping people in need. He added that swift-water rescue teams played an important role in rescuing stranded people in New Orleans.

Chief West praised the leadership of the Biloxi Fire Department, noting it was fortunate the California USAR teams had enough supplies for 12 days of self-sufficiency. He said key problems were infrastructure failures, slow response times, transportation difficulties, and lack of support in the face of overwhelming damage and devastation.

Chief Rick Martinez, Sacramento Metro Fire Department, stated that he had spent 31 years in fire service and had responded to many disasters, including the 1995 Oklahoma City bombing and the 9/11 attack on the World Trade Center in New York. He said the devastation from Hurricane Katrina was widespread, like earthquake damage, but the disaster dwarfed the World Trade Center event because of the many difficult challenges facing the Gulf Coast. He noted electricity outages

meant gas stations could not operate, so people were not able to drive away. In addition, roads were widely damaged and miles of train tracks moved as a result of the storm surge. He observed that there was no communication, no sewer service, no drinking water, so conditions deteriorated rapidly. He said that even if cell towers remained standing, their batteries go dead, and fuel for generators runs out, delaying calls for help. One problem facing responders is the limited number of debris-free areas available for staging and sheltering purposes. Local and state response agencies were not well prepared to handle the situation, demonstrating a need for more training and experience. Military assets were not available for Hurricane Katrina response, possibly because of the forces and equipment tied up in the war with Iraq. The alternatives were ground transportation or contracting with private companies for airplanes. He added that homeland security concerns have overshadowed emergency management and disaster preparedness efforts in recent years and recommends public education and outreach to local jurisdictions so they understand the importance of providing in advance for food, clothing, and shelter. He noted local agencies were sometimes slow in asking for help, so additional training would be useful. He added that some of the problems would not have happened in California because of the well-developed mutual aid system here.

Chief Martinez talked about the danger of hazardous chemicals, raw sewage, and contaminants from ruptured gas and fuel lines. These products combine and create a "toxic soup," and he recommended further practice in handling hazardous materials and technical aspects of rescues. He suggested combining USAR and medical services operations to provide better stopgap relief. He recommended that the USAR Committee look at ways of breaking into smaller groups for the first wave of relief efforts, and he advocated using the National Guard.

Chief Martinez commented that getting information to the public is an ongoing challenge. He noted that with events like a hurricane, people have only a few days to prepare and evacuate, but California has earthquake hazards year-round without warning, and citizens should know how to minimize their impacts. He expressed his opinion that people are too dependent on modern technology, so problems multiply when technology fails. He advocated setting reasonable objectives and attainable goals and taking small steps in terms of educating the public and promoting mitigation. He said he will be retiring soon and plans to spend more time advocating for public awareness and education. He noted people need to know how to provide for their own family safety first, and then deal with community safety.

Maria Shriver Joins Governor's Office of Emergency Services (OES) for 1st Annual "Day of Preparedness" Education Fair

OES and more than a dozen local and state emergency response and disaster preparedness agencies (including the Seismic Safety Commission) participated in California's first annual "Day of Preparedness" Education Fair. More than 400 area school children and adults attended the education fair and actively learned how they can prepare themselves, their families and their communities for disasters.

The event took place on September 20, 2005. State OES Director Henry Rentiera is seen below introducing First Lady Maria Shriver, along with Chief Rick Martinez, Sacramento Metro Fire Department. The Seismic Safety Commission participated by providing its *Prediction Contest*. John Craney, State Department of Fire and Forestry Protection was the lucky winner with his prediction for Imperial County.



Above, First Lady Maria Shriver introduces Fire Chief Rick Martinez at the First Annual Day of Preparedness Education Fair. Upper right, Karen Cogan, Commission Education & Outreach Manager and Staff Senior Engineering Geologist Robert Anderson work the Commission's Exhibit. Lower right, Karen assists fair attendees play the Commission's Prediction Contest

Homeowner's Guide to Earthquake Preparedness Available in Spanish

The Commission contracted with the Collaborative for Disaster Mitigation, San Jose State University to translate and simplify the Commission's *The Homeowner's Guide to Earthquake Safety in Spanish*. The booklet was developed and adopted by the Seismic Safety Commission per existing law. California law contains several provisions to help protect buyers and sellers in home transactions. With respect to a residential buildings' ability to resist earthquakes, the law requires only that sellers inform buyers about known weaknesses. This booklet helps the seller fulfill the legal requirement for selling a home built before 1960 by explaining how to complete the required disclosure report(s). The Guide was released December 2005. Check the Commission's website www.seismic.ca.gov



Commission Chairman Larry Klein Testifies before Joint Legislative Committee

On October 24, 2005, the Joint Legislative Committee on Emergency Services and Homeland Security held a hearing entitled "Is California Prepared for The Big One: Earthquake, Tsunami, Wildfire, Flood, An Act of Terrorism?" The Committee Chair was Senator Christine Kehoe. Speakers on the panel "Will State Essential Services Be Available in an Emergency," were Seismic Safety Commission Chair Lawrence Klein; Elizabeth Lyman, Deputy Director Department of Health Services; Les Harder, Acting Deputy Director for Flood Management, Department of Water Resources; and Randy Isasaki, Chief Deputy Director, California Department of Transportation. Hearings will continue throughout the state to determine the State's preparedness for both natural and man-made disaster. Its powers include providing a public forum for discussion of California's emergency services and homeland security issues, making recommendations as to legislation and forming technical advisory committees to assist it in carrying out its duties.



Above OES' Director Henry Rentiera is seen addressing the Joint Committee (picture courtesy of Robert A. Eplett, OES Photography & AV Specialist)



National Earthquake Engineering Simulation (NEES Inc) Open House

On November 17, 2005, National Earthquake Engineering Simulation (NEES) Consortium Inc. held its first open house at their national headquarters in Davis, California. NEES Inc. is a National Science Foundation-sponsored non-profit organization that manages activities, earthquake engineering research equipment and resources at 15 experimental facilities, collaborative tools, a centralized data repository, and earthquake simulation software. This virtual super laboratory allows researchers to participate or to run experiments and computer simulations in support of earthquake engineering research.

Commission Executive Director Mr. Richard McCarthy was one of several invited speakers to provide some remarks at the ribbon cutting ceremony.

Newsletter Contributors:

Editor: Karen Cogan, Public Education & Outreach

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Governor Schwarzenegger Commission Appointments

Governor Schwarzenegger appointed Commissioners Jeff Sedivec, Gary McGavin, Kandiah Arulmoli, Keith Wheeler, and Dennis Mileti. He reappointed Commissioner Dr. Lucy Jones.

Commissioner Sedivec of San Marcos is currently a member of the California State Firefighters' Association and served as the President of the Association from 1994 to 2004.

Commissioner McGavin of Redlands is an associate professor of architecture of California State Polytechnic University, Pomona. Commissioner McGavin previously served on the Commission from 1991 to 1999.

Commissioner Arulmoli of Huntington Beach, is a principal of Earth Mechanics, Inc., a geotechnical engineering consulting firm since 1997. Previously, he was a senior engineer for CH2M Hill, Inc. from 1994 to 1997.

Commissioner Wheeler of Toluca Lake served as Earthquake Preparedness Training instructor for the American Red Cross since 1993. Commissioner Wheeler previously served on the Commission from 1995 to 1999.

Commissioner (Dr.) Dennis Mileti of Rancho Mirage, is professor emeritus at the University of Colorado at Boulder and served as director of the Natural Hazards Center and chair of the Department of Sociology. He is a member of the Earthquake Engineering Research Institute and the Department of Homeland Security's National Social Science Research Center on Terrorism.

Commissioner (Dr.) Lucile Jones of La Canada. Commissioner Jones and serves as Scientists-in-charge for southern California U.S. Geological Survey Earthquake Hazards Team.

These positions require Senate confirmation and the compensation is \$100 per monthly commission meeting and reimbursement of travel expenses.

Educational Tour Spotlights the Mission Inn, Riverside California

The Commission held its September 8, 2005 Commission meeting and workshop in Riverside California, and was treated to an educational tour. Mr. Rick Byrd, Structural Engineer (Byrd and Associates), was the project manager for the renovation/retrofit of the Mission Inn. Mr. Byrd graciously provided interested commissioners, staff and members of the public a tour of the Mission Inn, and gave an overview of the retrofit project. Rick formed his own firm since the renovation of the Mission Inn. The firm that did the structural retrofit design was Johnson & Nielsen Associates. The Commission commends this magnificent effort to preserve such a treasure.

Pictured below at far left, Mr. Rick Byrd, Structural Engineer of Johnson & Nielsen Associates led commissioners, staff, and interested members of the public of the Mission Inn Tour



Commission Elects New Officers

At the October 2005 Meeting, the Commission confirmed Larry Klein as Chairman, and in November elected Jeff Sedivec as Vice Chairman. Chairman Klein represents *public utilities*. Vice Chairman Sedivec represents *fire protection*. Their terms as Chair and Vice Chair are for one year.

Seismic Safety 2005 Legislation

Commission-sponsored Bills

AB 1374 (Liu) - This measure repeals the existing sunset (July 2007) on the Seismic Safety Commission's funding by the Insurance Fund and extends funding through July 2013. The Governor vetoed the bill on October 7. In the veto message, the Governor cited duplicative functions of the Commission and the California Performance Review's original recommendation to eliminate boards and commissions. Members of the Commission are working with the Administration to communicate the complete charge of the Commission and to ensure the public's best interest regarding seismic safety remains foremost and that California continues seismic mitigation efforts to protect California.

AB 584 (Blakeslee) - This bill repeals references to the obsolete Alquist Fund (inactive) and transfers funds remaining in the Alfred E. Alquist Earthquake Fund to the Seismic Safety Account for expenditure in the 2005-06 fiscal year. This bill was signed into law by the Governor on July 21.

SB 1054 (Soto) - This bill imposes a threshold building code standard on charter schools. It establishes that the UBC applies to charter school facilities. This bill also imposes a January 2007 deadline for non-compliance, exempts charter schools operated by federal agencies, and clarifies that local agencies are responsible for enforcement. The Governor signed this bill into law on July 19.

Position Bills

AB 304 (Hancock) - Supported by the Commission. Authorizes local government to establish reconstruction standards applicable to existing wood framed, multiunit residential soft-story buildings. The Governor signed this bill into law on October 5.

San Francisco Public Utilities Commission Water System Improvement Program Review Committee

In November, San Francisco Public Utilities Commission (SFPUC) representatives made a presentation to the Commission regarding proposed changes in the Hetch Hetchy capital improvement projects and their impact on seismic safety. The Seismic Safety Commission is responsible for determining if any of the proposed changes to the Hetch Hetchy project will significantly impact seismic safety risk.

Once the revised program is approved by the SFPUC in late November, the Seismic Safety Commission will have 90 days to review and comment to the Governor and Legislature on the potential seismic safety impacts. Delays in the SFPUC work schedule are anticipated which could produce short-term increases in seismic risk. However, enhancement to the program will create long-term benefits. Because of this, the Commission needs to carefully weigh those tradeoffs.

Commissioner Mark Church noted the Hetch Hetchy water system is critically important for all Bay Area water users.



Pictured above from left to right are San Francisco Public Utilities representatives Brian Sadden, Paul Mazza, and Tony Irons.